



**CITY OF SUNNYVALE
REPORT
Planning Commission**

October 10, 2005

SUBJECT: **2005-0279:** Appeal of decision by the Director of Community Development denying a Tree Removal Permit for the removal of one Redwood Tree located at **1633 Edmonton Avenue** (near Helena Dr) in an R-1/S (Low-Density Residential/Single Story) Zoning District:

REPORT IN BRIEF

Existing Site Conditions Single Family Residence. The subject Redwood tree is located in western portion of the front yard.

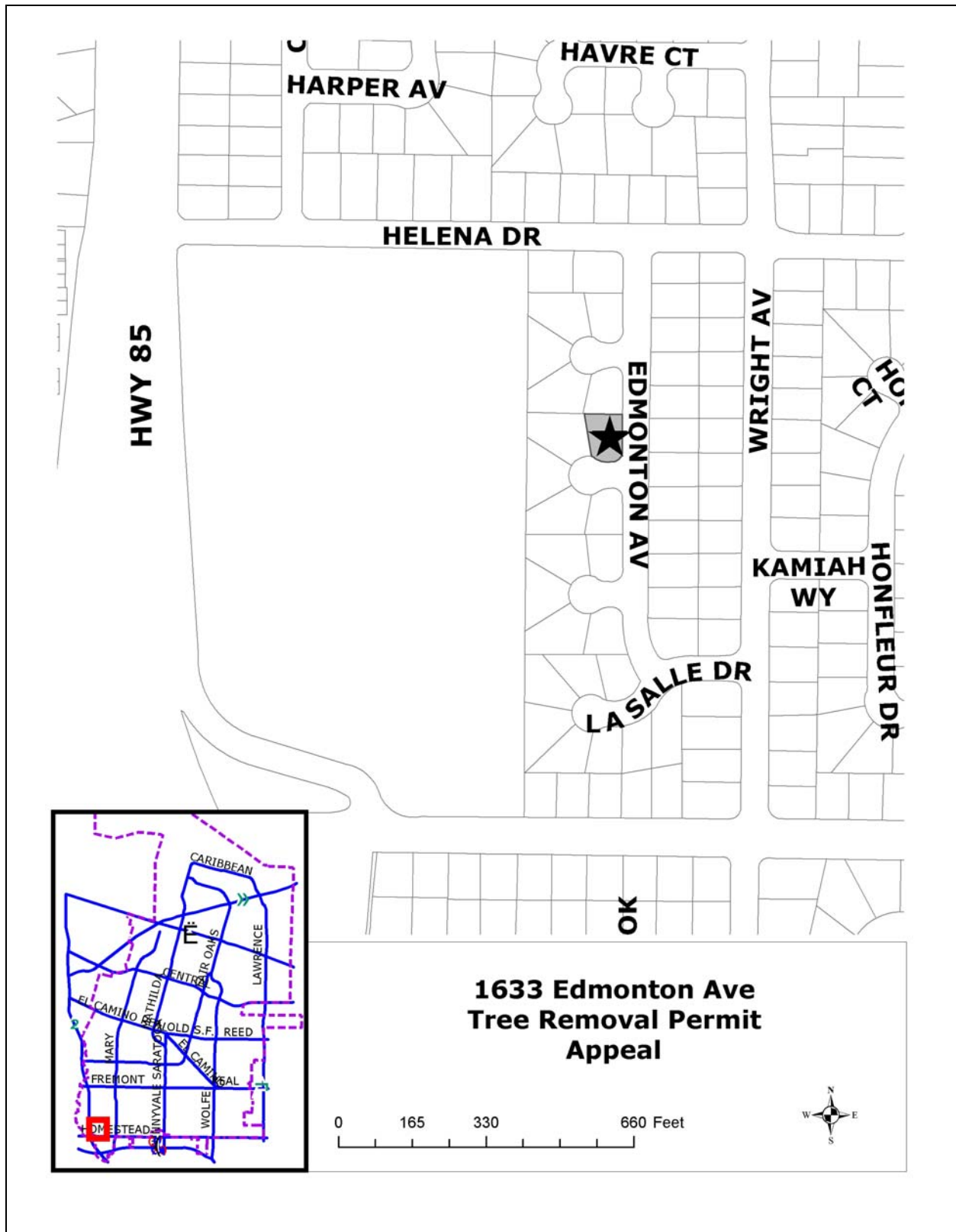
Surrounding Land Uses

North	Single Family Residential
South	Single Family Residential (across Edmonton Ave.)
East	Single Family Residential (across Edmonton Ave.)
West	Single Family Residential

Issues Tree Removal Permit - Appeal

Environmental Status A Class 4 Categorical Exemption relieves this project from California Environmental Quality Act provisions and City Guidelines.

Staff Recommendation Deny the appeal and uphold the Decision of the Community Development Director.



PROJECT DATA TABLE

	EXISTING	PROPOSED	REQUIRED/ PERMITTED
General Plan	Low Density Residential	Same	--
Zoning District	R-1/S	Same	--
Lot Size (s.f.)	7,931	Same	8,000 min.

ANALYSIS**Description of Proposed Project**

In May 2005, the property owner requested a Tree Removal Permit for the removal of a Redwood tree (approximately 80-100 feet tall) located on the western part of the front yard of their single family home (Attachment C-Pictures). On April 10, 2005, the City Arborist inspected the tree and recommended denial for the removal of the subject tree. Following this recommendation, Planning Division staff visited the site and concurred with the City Arborist and was unable to conclusively make the required Findings to permit removal of the tree. The applicant has appealed this decision (Attachment D – Appeal Letter).

Background

Previous Actions on the Site: There are no previous Planning actions related to this site.

Environmental Review

A Class 4 Categorical Exemption relieves this project from California Environmental Quality Act provisions and City Guidelines. Class 4 Categorical Exemptions includes minor alteration of land.

Tree Preservation Ordinance (SMC 19.94)

On December 12, 1991, the Tree Preservation Ordinance was established in order to preserve mature trees of significant size. Chapter 19.94 of the Sunnyvale Municipal Code defines a ‘protected tree’ as a tree with circumference equal to or greater than 38 inches when measured four feet above the ground. A Tree Removal Permit must be obtained prior to removal of a protected tree from private property in any zoning district. An application to remove a tree may be issued if:

1. The tree is diseased or badly damaged;
2. The tree represents a potential hazard to people, structures or other trees;
3. The tree is in sound condition, but restricts the owner's or the neighbor's ability to enjoy reasonable use or economic potential of the property.

Applicant's Appeal

The applicant notes the following in their appeal (Attachment D – Appeal Letter)
The subject tree roots are a potential hazard as:

- The tree roots have spread below the house foundation as roots (small and large) have been found in the atrium area.
- Roots have invaded the lateral of the sewer line as indicated by number of sewer service calls noted in the applicant's records.
- Vertical cracks found in two rooms closest to the tree; potential damage to the radiant heating system located in the concrete floor slab of the Eichler house.

Staff Discussion

The City Arborist and Planning staff visited the site and determined that the tree is healthy and structurally safe and has 50-70 years left in its life span. Staff notes the following site conditions:

- Subject tree is located above the existing sewer line and approximately 10 feet away from the house (not an ideal location);
- The larger size of the subject tree (as compared to the other redwood tree located on the east side of the driveway which was planted around the same time) is indicative of root intrusion in sewer lines.
- Applicant provides service records as evidence of root intrusion in the lateral of the sewer line;
- Large sized root (approximately 2-3 inch diameter) found in the atrium by the applicant ;
- Smaller fibrous roots existing in the atrium landscaped area.

Roots in lateral/sewer line: The City Arborist suggests that the tree root intrusion in the sewer line lateral may be addressed by replacing the existing sewer line by a pipe bursting method (also known as the trenchless method). This method would replace the damaged sewer line (which needs replacement due to age and root invasion) and also save the tree. This method of installing underground pipelines is considerably new and has not been used in similar situations in Sunnyvale, but the advantages of this method merits consideration in this situation as well as in similar situations in Sunnyvale. Following is a brief description and cost analysis of this method.

Trenchless Method: This is an emerging technology in the United States (has been used for over 20 years in Europe) utilized in the rehabilitation of underground infrastructure. In general, this method entails advancement of a cone shaped bursting head through an origin that due to its geometry translates forward thrust into radial expansion forces. This force shears/bursts the existing pipe and then installs a new pipe simultaneously. This method is especially advantageous in upsizing, structural replacement of large pipeline infrastructures, and situations where minimal excavations are desired.

Since this method does not entail trenching and removing trees/structure it is also very cost efficient. Staff notes that trenchless lateral and sewerline lateral installation is done by a majority of the plumbing services (commonly advertised in the yellow pages) in this area.

A comparative cost analysis of the two methods at the subject site is as follows:

Cost Analysis

	Trenchless	With Trenching
Replace lateral (includes City permits & fees)	\$2, 575	\$2,125 (not including cost of tree removal)
Cost of Tree Removal	--	\$6,000
Total Cost of Project	\$2,575	\$8, 125 (including cost of tree removal)

Source: Plumbing Estimate – Mike Counsil Plumbing; Tree Removal Estimate – Biota Tech

The above estimate indicates that the trenchless method is approximately 20% more expensive than the traditional trenching method. But, when the entire cost of the project is compared for the two alternatives, the trenchless method is four times cheaper since it does not entail removal of the tree.

Staff notes that the need for replacement of laterals primarily due to materials (such as the orange berg) and age leads to leaks which then leads to root intrusion is a common problem in Sunnyvale. New laterals are either made of PVC or VCP (4 inch diameter), which are less susceptible to root intrusion. Staff believes that since the trenchless method is cost effective, saves trees, landscaping and structures, it has merit and can be used in similar situations in Sunnyvale.

Staff also notes that the Tree Preservation Ordinance (19.94.060 (b)) does not specify infrastructure (such as underground utilities) as an element for the potential damage finding warranting tree removal. Staff believes that infrastructure such as underground utilities could be considered as part of the structure subject to potential hazard requirement findings.

Roots below foundation of the house: The City Arborist notes that redwood trees have prolific roots. The small fibrous roots in the atrium examined by staff may not be a potential hazard to the house foundation. The large root found (by the applicant) in the atrium is indicative of root growth that could be potentially damaging to the house foundation. The visible vertical cracks may be another symptom of the lifting of the foundation. Due to carpeting on the floor other cracks are not visible. The City Arborist has indicated to the applicant that additional trenching (by a certified arborist) near the outer edge of the structure could provide additional evidence regarding the roots. No additional trenching has been done to lead to conclusive information regarding potential hazard to the foundation due to the roots.

Staff believes that the option of placing root barriers near the edge of the foundation is not appropriate in this situation as the roots have already proliferated below the foundation to the atrium where they will continue to grow and enlarge due to the presence of water and nutrition.

Comment on Appeal: The subject tree is large in size, healthy and structurally sound making it indeed a magnificent tree. Staff has suggested several options (as described above) to save this magnificent tree, located at a less than optimal spot. One of the options also include being a test-case for the sewer lateral replacement by the trenchless method, but staff also realizes that none of the options completely addresses the root intrusion problem in the sewer line lateral as well as the house foundation. As noted in the appeal letter, the removal of the tree is a costly option that the applicant is willing to make to address the root intrusion problem.

Expected Impact on the Surroundings: The subject tree, approximately 80-100 feet high, is very visible from the street. Removal of this tree would have a detrimental effect on the overall streetscape.

Fiscal Impact

No fiscal impacts other than normal fees and taxes are expected.

Public Contact

Notice of Public Hearing	Staff Report	Agenda
<ul style="list-style-type: none"> Published in the <i>Sun</i> newspaper Eight notices mailed to property owners and residents adjacent to the project site 	<ul style="list-style-type: none"> Posted on the City of Sunnyvale's Website Provided at the Reference Section of the City of Sunnyvale's Public Library 	<ul style="list-style-type: none"> Posted on the City's official notice bulletin board City of Sunnyvale's Website Recorded for SunDial

Conclusion

Findings and General Plan Goals:

Staff is recommending denial for this project because the Findings (Attachment A) were not made. However, if the Commission is able to make the required findings, staff is recommending Conditions of Approval located in Attachment B.

Alternatives

1. Deny the appeal and uphold the denial of the Tree Removal Permit.
2. Grant the appeal and approve the Tree Removal permit subject to the recommended Conditions of Approval.
3. Grant the appeal and approve the Tree Removal Permit subject to modified Conditions of Approval.

Recommendation

Recommend Alternative 1.

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Reviewed by:

Gerri Caruso
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Planning Officer

Attachments:

- A. Recommended Findings
- B. Recommended Conditions of Approval
- C. Photos of Subject Tree
- D. Letter of Appeal from the Applicant

Recommended Findings – Tree Removal Permit

In order to grant a Tree Removal Permit, one or more of the following findings must be met. Staff was unable to make these required findings.

1. The tree is diseased or badly damaged.

The subject tree is not diseased or damaged, and is in good health.

2. The tree represents a potential hazard to people, structures or other trees.

City Staff inspected the site and the subject tree. The roots of the Redwood tree have intruded in the lateral of their sewerline (which can be addressed by trenchless method for installing a new lateral to the main sewer line). Cracks in the rooms along the wall joints could be due the tree roots or settling of the ground (a common occurrence) whereby the roots may not be responsible. There is evidence of roots in the atrium but no further investigation has been conducted by the applicant to conclusively determine damage or potential damage to the house foundation by the subject tree's roots.

3. The tree is in basically sound condition, but restricts the owner's ability to enjoy the reasonable use or economic potential of the property, or unreasonably restricts an adjoining property's use or economic potential of the adjoining property. In the event this is the sole basis for the application, the following criteria shall be used to evaluate the application under this subsection:

- a. The necessity of the requested removal to allow construction of improvements such as additions to existing buildings or incidental site amenities or to otherwise allow economic or reasonable enjoyment of property;
- b. The topography of the land and the effect of the requested action on water retention and diversion or increased flow of surface water;
- c. The approximate age of the tree relative to its average life span;
- d. The potential effect of removal on soil erosion and stability where the tree is located;
- e. Current and future visual screening potential;
- f. Any other information the Director of Community Development finds pertinent to the application.

Staff believes that the Redwood tree is not restricting reasonable use or economic potential of the property. The tree has a remaining life expectancy of at least another 50-70 years. Staff notes that the tree is not located in an ideal location and could be better located, but the size precludes moving the

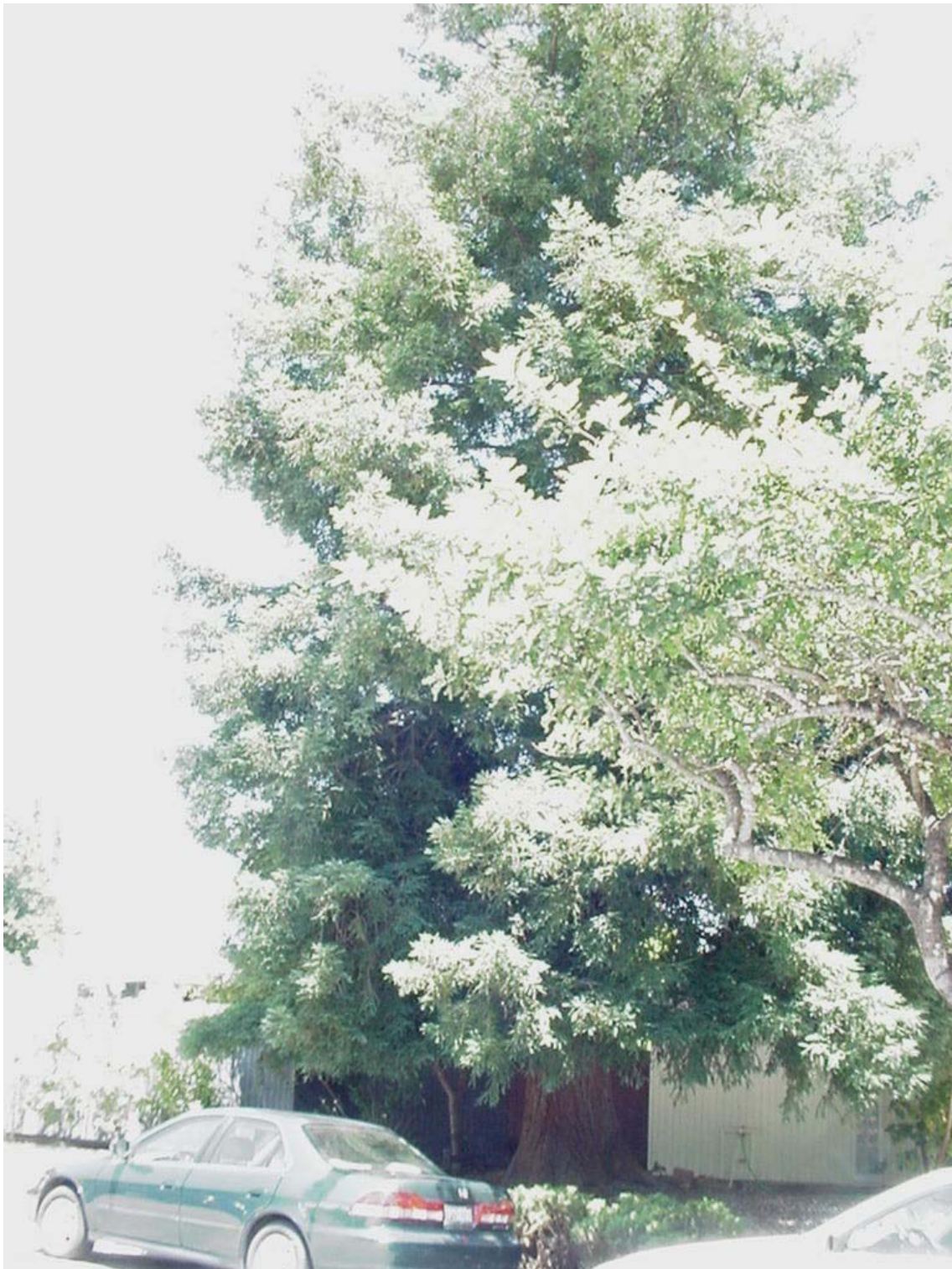
tree. Staff believes that the subject tree is in good health, and has a significant remaining lifespan that merits preservation.

Recommended Conditions of Approval – Tree Removal Permit

In addition to complying with all applicable City, County, State and Federal Statutes, Codes, Ordinances, Resolutions and Regulations, Permittee expressly accepts and agrees to comply with the following conditions of approval of this Permit:

Unless otherwise noted, all conditions shall be subject to the review of approval of the Director of Community Development.

1. One replacement tree, a minimum of 24-inch box in size, shall be planted anywhere on the property or an in-lieu fee of \$222.00 be paid to the City to allow a tree to be planted in a City park or other public property.
2. The replacement tree shall be planted within 90 days of the tree removal date.



View of the subject Redwood Tree located in the front yard



View of the base of tree near the house



View of the tree, located approximately six feet away from the house



View of small fibrous roots in the atrium